

Residential Buildings: Energy Consumption, Expenditures, and Emissions

The nation's residential buildings account for approximately 22 percent of the nation's total energy consumption, 20 percent of total consumer energy expenditures, and are responsible for 17 percent of greenhouse gas emissions.

The following provides background, historical, and estimated information on the energy consumed, dollars expended, and greenhouse gas emissions from residential buildings.

Consumption

The nation's residential buildings account for approximately 22 percent of the nation's total energy consumption.

Despite greater use of energy efficient appliances and lighting, the Energy Information Administration (EIA) projects that residential buildings will still account for approximately 21 percent of the nation's total energy consumption in 2020. The lack of progress in making sizeable reductions in total energy consumption in residential buildings is due to expected growth in households, population, and appliance numbers and usage.

In terms of energy consumption by mode, residential buildings consumed 37 percent of the total amount of electricity and 21 percent of the total amount of natural gas used in 2008. The single largest reason why residential buildings consumed such large amounts of those two sources of energy is because residential buildings are largely reliant on them to meet their energy needs.

Expenditures

The nation's residential buildings account for approximately 20 percent of total consumer energy expenditures.

Without changes to the nation's energy policy, the EIA projects that by 2020 residential building expenditures will increase by almost \$20 billion. The cost for electricity is the single largest reason why residential energy expenditures are projected to increase. Space heating, space cooling, and water heating represent some of the largest contributors to the expected rise in residential energy expenditures.

Emissions

The nation's residential buildings are responsible for approximately 17 percent of total greenhouse gas emissions.

By 2020, the EIA projects that without changes to the nation's energy policy emissions from residential buildings will increase to 21 percent of the nation's total. The largest contributors to the projected increases in greenhouse gas emissions from residential buildings also come from space heating, space cooling, and water heating.